

1990

The parent checklist for new kindergarten pupils: A validation study

Willis Glen Miller Jr.

College of William & Mary - School of Education

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Miller, Willis Glen, Jr., Ed.D.

The College of William and Mary, 1990

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**THE PARENT CHECKLIST FOR NEW KINDERGARTEN
PUPILS: A VALIDATION STUDY**

**A Dissertation
Presented to
The Faculty of the School of Education
The College of William and Mary in Virginia**

**In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education**


**by
Willis Glen Miller, Jr.
June, 1990**

**THE PARENT CHECKLIST FOR NEW KINDERGARTEN
PUPILS: A VALIDATION STUDY**

by

Willis Glen Miller, Jr.

Approved June 8, 1990



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DEDICATION

This work is dedicated to my family - to my wife, Marsha, and children, Amy, Chip, Scott, and John, who sacrificed more than I; and to my father, Bill, and to the memory of my mother, Linda, whose love and support over the years made it all possible.

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**THE PARENT CHECKLIST FOR NEW KINDERGARTEN PUPILS:
A VALIDATION STUDY**

ABSTRACT

State and federal guidelines for implementing programs for the gifted have required that placement into such programs begin as early as kindergarten. In order to help determine whether a child was functioning significantly above age level on certain tasks through multiple sources, a checklist for parents was developed and validated.

The parent checklist was analyzed for reliability and validity. Analysis of pre-school scores on the instrument was also conducted to determine whether or not placement into programs for the gifted could be predicted from the results. Parental responses were also investigated in an effort to determine the reliability of parents as a source of information about their children. Correlational studies were conducted on group test data which consisted of the Metropolitan Readiness Test, the second grade administration of the SRA Achievement Series, and the third grade administration of the Otis-Lennon School Ability Test. Additionally, correlational studies were conducted on a small sample of the students as first graders utilizing the Torrance Tests of Creative Thinking (Figural Form A) and the Scales for Rating the Behavioral Characteristics of Superior Students.

Statistical analysis included the use of multiple regression analyses and the determination of correlation coefficients (Cronbach's Alpha and Pearson Product Moment).

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SCHOOL OF EDUCATION
THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA**

**THE PARENT CHECKLIST FOR NEW KINDERGARTEN
PUPILS: A VALIDATION STUDY**

Chapter I

INTRODUCTION

Justification for the Study

Beginning July 1, 1985, the Virginia Plan for the Gifted required local school divisions to provide services for gifted students in all grades including kindergarten. Implementation of this plan caused marked changes in the state's approach to gifted education because prior to that time, each school division developed and maintained its own program independently (E. J. Pelfrey, personal communication, September 10, 1986).

As a result of this autonomy, programming for the gifted was not consistent throughout the state, and programs or classes for the gifted typically began in the fourth or fifth grade when state mandated testing programs provided achievement tests that could be used in the screening process. Prior to the implementation of the Virginia Plan for the Gifted, the Talented and Gifted Program in Henrico County Public Schools began serving students in the fourth grade. Students were screened for the program beginning in the third grade, using a multiple criteria approach for identification which included ability, achievement, and creativity measures. A teacher checklist was also used to rate student's behavior in the areas of creativity, artistic abilities, and leadership.

With the implementation of the Virginia Plan for the Gifted, it was recognized that identification procedures had to be revised to make the selection process appropriate for students in the primary grades. It became apparent that if programs were to involve kindergarten students, then identification would have to begin prior to the time the students started school. Keeping with the guidelines previously established to identify gifted students in the fourth grade, the use of multiple criteria again became part of Henrico County's identification process for the younger students. Information from a variety of sources was needed to identify the young child as being gifted. Measures of achievement and teacher observation methods were already in use for other purposes, but no measure was readily available which was believed to be an adequate screening device for potentially gifted kindergarten students. As the system had a well publicized kindergarten registration program each April, it was decided that a parent survey- type screening instrument could be used at that time for the purpose of rating those four and five year olds who would begin school the following September. The main purpose of this study was to develop and validate a parent survey for use as a screening inventory for young, potentially gifted kindergarten students.

Theoretical Rationale

The theoretical rationale for this study was derived from developmental psychology with particular emphasis given to developmental stage theory. In general, this theory stated that as a child grew, the acquisition of behavior in a certain area was dependent upon the acquisition of behavior in other areas. Growth was said to take place as the child passed through sequences of developmental phases, and that movement from one stage to another was based upon significant experiences within each stage. These theories were

instrumental in providing the basis for descriptions of behavior that could be linked to age, thus conclusions could be drawn as to what was typical, advanced, or delayed behaviors.

The work of Alfred Binet and Theodore Simon in creating the first intelligence test was designed from a developmental sequence of tasks, and was constructed based upon observations of normal children (Gowan, 1977). Piaget's theory of cognitive development began with this testing movement and dealt with the quality of thought processes rather than simply restricting intelligence to the number of correct answers on a particular set of tasks. Piaget recognized patterns of responses which were linked to age and also realized that observations of children and interviews with them would allow more information to be gathered, providing a better understanding of their thought processes. Intelligence, according to Piaget, involved an interactive process between the child and his or her environment (Ginsburg & Oppen, 1969).

Gesell theorized that social and physical skills also passed through certain developmental periods, as did the intellectual components. Through this work, he provided parents with a means of comparing their children's growth with others (Gesell, 1945). Feldman (1982) later expanded developmental theory into areas of giftedness, creativity, and genius, thus completing the picture of the total child. His theory recognized the importance of the environment in contributing to the development of specific abilities, providing the concept that the timing of the interaction between the child and the field (or environment) was critical to both the age of the child and the state of development of the field. The importance of the interaction with the environment at critical periods, or ages, has been supported by others (Gowan, 1975; Horowitz, 1987; and Sternberg, 1985).

With regard to the identification of gifted children today, educators continue to base a variety of assessments on developmental terms. Current federal and state guidelines have included formal assessment in the process, and also have called for multiple measures to be used. These measures typically include teacher checklists, and the use of teacher-based assessment can cause particular problems when kindergarten children are expected to be placed into programs early in the school year as teachers will not know the children well and objective testing information will probably not be available. Ashman and Vukelich (1983) reported that teacher nomination was the most widely used source of referral for placement into the gifted programs. Clark (1983) reported that teachers tended to utilize information in student records when making such referrals, and that their decisions were influenced by group ability and achievement test results that were gathered over the years. Ehrlich (1980) referred to earlier research with the Stanford-Binet which indicated that early childhood assessment of intelligence was not highly correlated with later assessment when she referred to another problem involving the placement of young children into programs for the gifted. She stated that a major obstacle in this process was that of overcoming "established convictions that the process of identification cannot be applied successfully to the very young" (p.3).

Khatena (1978) provided a source of information which could be used to identify advanced kindergarten students when he described the parent as being "the most potent lead to the child's attempts to realize his full potential" (p.266). The ability of parents to identify giftedness in their children was described in a study which compared teachers' and parents' ability to note advancement (Ciha, Harris, Hoffman, & Potter, 1974). The results of this study indicated that parents were able to correctly identify 76% of the gifted

children in a kindergarten group compared to the teachers' ability to identify only 22%. The authors pointed out that the "commonly held belief that parents tend to overestimate their own child's ability" (p.195) contributed to the fact that parents were usually ignored by educators, and that parents were typically not involved in the identification process. Tuttle and Becker (1983) explained that the reason for parents success in identification was related to the setting in which observations occurred. The home was said to be more relaxed and natural than the school, and that the pressure to conform to the classroom group often prevented the gifted from performing to their full potential. For these reasons, assessments which included parental observations have been described as being essential to correct identification procedures. Ehrlich (1980) has also stated that parental input has proven to contribute greatly to the success of programs for the gifted.

Research Questions

The present study may be described as a predictive validity study. The research questions focused on the prediction of performance in school from a parental report that was developed and validated for the study, and from tests and behavior rating scales commonly used to identify the gifted. The question of parents' reliability concerning questions about their preschool children was also investigated.

Definition of Terms

PAL - Plan for Advanced Learner - In this study, PAL referred to those kindergarten through third grade students who were placed in the upper two to three per cent of their class based upon high ability and high achievement. For students to be so designated, their academic needs were so advanced that

they could not be met in the mainstream classroom, and curricular adjustments were made in accordance with the PAL.

TAG - Talented and Gifted Program - In this study, TAG referred to a program for fourth through eighth grade students who were found to be in the upper nine to ten percent of their class in ability, achievement, creativity, and leadership.

Gifted - Gifted in this study referred to those students who were either designated as being PAL or TAG, based upon their grade placement.

CHAPTER II

LITERATURE REVIEW

Historical Perspective

The history of the gifted child movement has as its foundation the development of the individual intelligence test. It is interesting to note that the movement began in the schools, the primary training ground of the gifted today. In an address before a symposium on research in early childhood education, Gowan (1975) reported that around the turn of the century, school officials in Paris had become concerned that slower students were taking an inordinate amount of time to teach and that because of the necessary attention given to these students, the more capable children were in danger of becoming neglected by their teachers. These officials turned to a psychologist by the name of Alfred Binet and asked that he develop a test which could be used to screen out the slower students so that students could be grouped by their abilities, allowing the more capable ones to be taught at an accelerated pace when compared to their less able peers. Binet's response to this situation was to organize a series of developmental tasks and to note at which age normal children completed them. He then arranged the tasks by age level order. By measuring a child's performance on this series of tasks, he was able to determine an ability level for that child. This level became the mental age, in Theodore Simon's revision of the test three years later (Gowan, 1975).

This scale was seen by many as being a breakthrough in developmental psychology. One approach to a more widespread use of the instrument was merely to translate the scale and to apply it to English speaking students in America. Another approach was broader in scope and its implications have enabled one researcher, Lewis Terman, to be called the "father of the gifted child movement". Terman observed that Binet's scale had application to all children, not merely to those who were considered to be slow learners, and that the scale could be adapted to measure abilities in gifted children. Terman also observed a ratio of developmental progress to chronological age, multiplied this factor by one hundred to eliminate decimals, thereby creating the intelligence quotient. Around 1910, Terman was asked to study and to revise Binet's scale, a work completed at Stanford University in 1916.

In World War I, Terman worked with other experts to develop a measure of ability that could be given in the army. Thousands were tested with the resulting instrument, and within a short period of time, the public became familiar with the concept of IQ. Soon intelligence testing, both group and individual, became widely used in the public schools. As testing became more popular, Terman began another project, the Genetic Studies of Genius, an in-depth study of one thousand gifted students. Results of this study began to be published in 1925, and as Gowan has stated, "it was perhaps the most remarkable and valuable longitudinal study ever undertaken" (p. 13).

While it is not appropriate to discuss this work in detail at this time, several of the conclusions are germane to the present study; these include:

- 1) the fact that gifted children are a diverse group with a common bond of high IQ;
- 2) developmental factors were evident in school, due to the fact that the most reliable way to identify the brightest students in a class was merely to find the youngest;
- 3) accelerated instruction was beneficial to all of the gifted

students, regardless of age; and 4) there was an overrepresentation of males in both the general sample and the high school sample.

Analysis of this study has revealed several significant omissions (Gowan, 1975). The first shortcoming was that intelligence was defined as being "what a Stanford-Binet measures" (p.12), an extremely narrow conceptualization. Another omission was the lack of significance attributed to socio-economic status, a seemingly influential variable, according to descriptions of groups within the study. Another factor that lacked attention was that of creativity, and also, the ethnic composition was not investigated. Gallagher (1985) also reported that the study may have overlooked certain individuals because students were originally selected for testing based upon teacher referral.

As a result of working with Theodore Simon in testing, Jean Piaget became involved in the testing movement. Ginsburg and Oppen (1969) reported that this involvement was the beginning of Piaget's work with children from which he began his theory of cognitive development. Piaget's task in revising a particular test was to use reasoning tasks which had been used in English tests and to write a standardized version that could be used in France. In working with the children in the standardization process, Piaget came to realize that there was a developmental pattern to their incorrect responses. That is, children of different ages gave different wrong answers and children of the same age gave similar types of responses. He concluded that the quality of thought processes was different at different ages and therefore, intelligence had to involve much more than the quantitative concept of the number of correct answers on a given set of tasks. He believed that the "real problem of intelligence was to discover the different methods of thinking used by children of different ages" (p.3). In his own work, Piaget adopted a more clinical approach of observation and interview because he felt that the

standardized approach was too rigid and did not allow for enough information to be gathered when the child taking the test did not understand the questions presented. With his clinical approach of investigation and his rejection of a standardized format, a third characteristic of Piaget's approach was to add the dimension of logic to the study of children's thought processes.

Piaget's theory of intellectual development involved four distinct periods from birth until adulthood (Ginsburg & Oppen, 1969; Sattler, 1982). The first, the sensorimotor period, lasted from birth to approximately two years of age. In this period, the infant and toddler passed through six stages beginning with simple reflexes and ending with representations of actions which were characterized as being internal or symbolic. The second period, the preoperational period (approximate ages two to seven years) was described as being a time of language acquisition and also a time when the child was able to utilize symbolic representation, such as searching for hidden toys. The concrete operations period was the third defined stage, and lasted from approximately seven years to eleven years. In this stage, the child developed conservation skills and was able to apply different cognitive operations to real objects. Conservation was defined as the ability to recognize that certain properties of a set remained the same when the physical arrangement of the set was altered. Conservation applied to many different tasks which involved such concepts as number, substance, weight, and volume. The final stage, formal operations, began around eleven years of age and was characterized as being a time when the child or adolescent was able to use abstractions to form hypotheses, and to use reasoning skills requiring deduction.

In conjunction with these stages, Piaget's concept of intelligence involved an interactive and adaptive process between the child and his or her environment. By interacting with the environment the child continually tried

to establish a balance between his or her needs and the demands of the environment. Cognitive growth occurred as the child moved away from reactions towards internalized symbolic representations. He further stated that organization and adaptation were two tendencies an individual possessed that determined how interaction with the environment occurred. Organization was defined as being "the tendency to combine two or more separate schemes into one higher order, integrated scheme" (Sattler, p. 41). Adaptation involved two processes - assimilation and accommodation. Assimilation was described as being the process of interaction with the environment in terms of the individual's unique ways of thought whereas accommodation was described as being more objective, and involved the individual's perception of objects by the actual attributes possessed. These two processes were said to occur simultaneously when a child adapted to the environment, and the balance between the two could vary in different situations.

Ginsburg and Opper (1969) described Piaget's belief that development and learning were separate processes. Development was said to involve maturation, experience (or contact) with objects, social transmission, and equilibration. Equilibration was defined as being the process which allowed the child to move "from one state of equilibrium to the next" (p. 174). Further, it was explained as follows: throughout development the child moves from states of a lesser degree of equilibrium to those of a greater degree of equilibrium. The tendency toward equilibrium results in an increase and stability; this stability is acquired by activity on the part of the child. The child is actively engaged in the process in the sense that he or she compensates for changes in the world, either by means of overt actions, as in the sensorimotor period, or by internal mental operations, as in the formal operations period. With age the equilibrium becomes more stable because the

child can anticipate changes and compensate in advance. True learning was said to occur as a result of the process of equilibration, and took place "when the child has the prerequisite mental structure to assimilate new experiences and the possibility to generalize to novel situations becomes feasible" (p.175). While Piaget's work became of great interest in the 1960's in academic circles, its impact was less on mainstream America, partly due to language differences and also due to the fact that it was not targeted for parents.

The work of Arnold Gesell and others at the Yale Clinic of Child Development however, enabled parents across the country to view their children in developmental terms. Gesell's theory of development has been described as being a maturational one which, like Piaget's, included psychological and cognitive components and also incorporated social and physical areas as well. Gesell theorized that growth was governed by the nervous system and that more complex kinds of behavior was possible only as an infant's nervous system became more mature. Gesell and his staff gathered data on thousands of babies and young children, and from this information described normal developmental milestones for various motor, language, and social skills. The norms established by this effort provided a standard by which parents could compare their child's growth to determine whether or not their children were advanced, normal, or delayed for their ages (Mulliken & Buckley, 1983). One outgrowth of Gesell's study was the Gesell Developmental Scale, originally published in 1945. This scale has been distinguished from Binet's in that it involved the total child, and did not merely focus on intelligence alone. In a description of the development of intelligence testing, Freehill (1961) actually placed the Gesell scale in a separate category of tests entitled "Child Study", emphasizing that a different conceptualization of measurement was involved. Indeed, Gesell (1945) cautioned against the use of

his stages as being strict criteria to measure a child's rate of growth. His interest was in the total child, and he also stressed individual differences. In his book, How a Baby Grows, he stated that "in actual life no one baby will show all these average trends every baby has his own way of growing up. No baby follows exactly an average time table" (p.2).

Within the theories of Binet, Piaget, and Gesell, cognition, learning, language, social skills, and motor development became parts of a developmental picture of a young child. Several years later, Feldman (1982) proposed that an extension of developmental theory be made for giftedness, creativity, and genius.

Gowan (1975) reported that from the 1920's to the 1960's, little research was completed which added to the base of knowledge concerning giftedness. Feldman (1982) explained that the reason for the lack of interest was reflected in the turbulent times of the 1960's. He reported that the interest about gifted children began to fade as interest in societal changes emerged. He stated that this was a period of time when various groups in the American culture were striving for equality and that the testing movement in schools was seen as being an institutional method to prevent equal access to educational programs. For this reason, studies in the field became politically and scientifically unpopular. While several important studies were accomplished during the next two decades, the author observed that research in the field as a whole had an "unguided quality" (p. 32).

Change for the better was observed in the late 1970's and early 1980's by Renzulli. Renzulli (1980) reported that a new trend had emerged at that time, one of expansion. He noted that by 1980 a shift in the political climate had occurred and that the commitment to gifted education was increasing significantly. Feldman (1982) also noted the renewed growth of the field and

stated that research in the areas of giftedness and creativity was urgently needed and concluded by stating:

Thus we are faced with a dilemma. The psychometric tradition - the bastion of creativity research - has produced two sets of instruments that, while extensively utilized by researchers, ultimately have been most disappointing in their ability to identify those talented individuals who express their abilities in highly creative and productive careers. Just as these tests have failed their predictive promise, they have contributed little to our understanding of the emergence and development of unusual abilities (p.33).

Modern Theories

Perhaps in a response to his own challenge, Feldman (1982) proposed that creativity should also be viewed from a developmental framework. This conceptualization of creativity contributed to the picture of the total child which was begun by the earlier theorists. Feldman proposed an extension of Piaget's developmental theory into the areas of giftedness, creativity, and genius. His theory utilized the Piagetian concepts of the interaction between the child and his or her environment, the developmental stage of the child, and the process of transition from one stage to the next. In his theory, he viewed creativity as being "an outgrowth of giftedness rather than as a separate ability" (p. 33). Basic to Feldman's theory was an understanding of the concepts of giftedness and creativity as seen in his definitions of the terms. He defined giftedness as "the potential to make significant contributions to any socially valued field" (p. 33), and he defined creativity as being "the optimal use of that potential" (p. 33). He contended that Piaget's concept of interaction was too broad and lacked the specificity required to bring about giftedness and

creativity. The interaction process, as described by Piaget, referred to the process by which the child had various encounters with the world and established meaning to these encounters by making his or her own symbolic representations of them. Feldman has contended that the Piagetian notion of the child's independence in establishing meaning to these interactions was sufficient to describe growth through the broad stages of cognitive development, but that it was not sufficient to describe the process of development in specific areas of giftedness. Feldman theorized that gifted performance also referred to the mastery of a specific field, and that such mastery resulted from "prolonged systematic, and guided interaction with specific environmental forces such as teachers, peers, educational materials, technologies, competitions, and performance" (p.34). In this concept, Feldman has expanded the role of the environmental experiences of a child to include a more specified role in the developmental process.

Feldman explained four forces within the environment that were needed to shape an individual's exceptional development within a specific field. These forces were the field itself, the state of the field in its own evolutionary process, the timing and quality of the child's interaction with the field, and the presence of instruction within the field. Feldman used the examples of Olga Korbitt (gymnastics) and Bobby Fischer (chess) to explain the role that these four forces played in the development of these champions. Olga Korbitt was said to possess an overwhelming desire or drive to focus on gymnastics, a very specific field. The importance of the field itself was seen when Feldman stated "that the existence of a medium of expression that can serve as an adequate conduit for such energy is virtually never the product of a single person's efforts" (p.35). Further, Olga Korbitt lived at a time when the sport was sufficiently advanced to allow her talents to be developed to the fullest extent

possible. In a similar manner, Bobby Fischer was exposed to chess at a time and in a manner which allowed his skills to mature as a grandmaster of the game. The role of instruction was seen in the development of both of these individuals, from Olga Korbitt's coaches to Bobby Fischer's teachers, and to the authors of the books Fischer used in his own study of the game. Feldman further explained this concept of interaction with the environment and the developmental process by the following:

The process of development in the Piagetian sense is incredibly robust (as it would have to be to claim universality); where the expression of extraordinary talent is concerned, the process is incredibly delicate. If any of the forces I have described (and no others as well) is not in near perfect coordination with the others in its timing, sequencing, duration, intensity, and specificity, the chances are greatly reduced for full expression of talent and, as a consequence, for great achievements and creative contributions (p. 37).

With regard to stages, Feldman again refers to the specificity of the field in which a child is advanced, and proposes that each highly specific field or domain has its own independent developmental trajectory. In this point, he has described various gifted children's test performance in both standard IQ tests and on tests which measure Piagetian stages. The children were described as being similarly placed on the results of both tests yet altogether different on performance-based measures in their areas of specialty. The specialty measures of their particular areas of giftedness yielded results more typical of those "usually achieved only by highly competent adults in the field"

(p.37). Viewing stages from this perspective, Feldman has altered Piaget's theory from a universal application to a more specified approach. Following interaction and stage, Feldman approached creativity similarly, by an extension of Piaget's notion of equilibration. Equilibration was described as being true learning, and was defined as being the "mechanism for the development of thought processes of each stage" (p. 39). When this process resulted in unique concepts or functions that could not be explained either by maturation or by the environment, Feldman referred to them as being "creations", and stated that Piaget viewed them as being "novelties." He further theorized that there were links between these creations and creative achievements as evidenced in both the colorful drawing of a young child and the works of great artists. The role of the equilibration process was seen in this description of creativity:

Finally - and I think most relevant for the field of giftedness and creativity are those relatively rare occasions when one has mastered a domain through all its existing stages, but a state of disequilibrium persists because of an unsolved problem, puzzle, or conundrum. When one fashions a way to go beyond the current state of knowledge of the field, creativity in the third and most unusual sense is in evidence (Feldman, 1982, p. 40).

Horowitz (1987) presented a similar model for regarding giftedness in a developmental perspective. Like Gowan, her model proposed an interaction between the organism and the environment. She proposed that the organism may be either vulnerable (and therefore impaired) or invulnerable (and unimpaired) to an environment which could be either facilitative to the

development of giftedness or non-facilitative to its development. Further, she stated that "it is assumed that an environment that is facilitative of development in one period of development may not be facilitative of development in another period" (p.166). An example was given of a child whose early development as an infant was considered to be excellent and relatively independent of environmental factors. At the age of two, the environment would have to become more facilitative in order for the same level of development to continue, because of the increased need of the infant for stimulation at that particular age. Her model also allowed for the exceptional individual who would develop optimally and independently of the environment. She also stated that for some, development at an early age may be normal, and become advanced only at later periods of development as in the case of Grandma Moses, the painter.

Two additional works on intelligence are relevant to the developmental perspective of giftedness. One different perspective on the concept of intelligence was introduced by Gardner (1983) who proposed a theory of multiple intelligences. Indeed, this theory has greatly expanded the notion that intelligence was merely what was measured by a particular test. He proposed that there were several different intelligences which included linguistic intelligence, musical intelligence, logical-mathematical intelligence, spatial intelligence, bodily-kinesthetic intelligence, and personal intelligence. The latter was defined as being that particular ability which provided "access to one's own feeling life and the ability to notice and make distinctions among other individuals" (p.239). Like Feldman's work, Gardner's could also be considered developmental in nature as each of the intelligences was described as being capable of having a particular "developmental history" (p.64). With regard to giftedness, he also noted that both the gifted and the typical individ-

ual would pass through stages within the intelligences as part of the growth process.

Assessment of these multiple intelligences is a task much more complicated than was the traditional method described earlier. Gardner proposed that an accurate picture of a student's intellectual abilities could be obtained after five to ten hours of observation in the classroom. The profile which would result would indicate "which lines are already launched in an individual, which lines show a decided potential for development, which are more modestly endowed or entail some genuine obstacles (such as tone-deafness, meager visual imagery, clumsiness)" (p. 388).

In a more recent work which encompasses a developmental approach, Sternberg (1985) has proposed a triarchic theory of intelligence. The author stated that his theory was a "theory of individuals and their relations to their internal worlds, their external worlds, and their experiences as mediators for the individuals' internal and external worlds" (p.317). This theory contained three subparts or subtheories described as being contextual, experiential, and componential. The contextual subtheory was described as being that part of intelligence which was related to the outside world of the individual, telling which behaviors were appropriate in a given set of contexts. The experiential subtheory addressed the issue of when a specific behavior was intelligent based upon the behavior and the amount of experience the individual has had in that particular situation. The componential subtheory addressed the issue of how intelligent behavior was generated by specifying the "potential set of mental mechanisms that underlie intelligent behavior, regardless of the particular behavioral contents" (p.xiii).

In an experiment designed to assess information processing (one aspect of the componential subtheory), a developmental pattern of responses was

observed. Second graders through college students were given an analogies test which involved both verbal and pictorial cues. A distinct pattern of the emergence of first and second-order relations between the items was noted which paralleled Piaget's formal operations period. Age-related differences were also noted in response time and in other aspects of problem solving which further supported the conclusion that developmental differences were present in intelligence as defined by this theory.

Characteristics of Gifted Children

Gifted children were first mentioned by Terman in his landmark study, Genetic Studies of Genius in 1925. In this study the gifted were defined as simply being those who scored in the upper 2% on the Stanford-Binet Intelligence Test. A definition that restricted abilities to scores on tests proved to be too narrow in the field of research on giftedness, and Witty expanded the definition in 1940 by explaining that gifted children were those "whose performance is consistently remarkable in any potentially valuable area" (p. 516). The notion of extremely high scores on IQ tests as being the primary indicator of giftedness has been retained through the years, and current application varies. Today, the term has become synonymous with IQ scores placed in the upper three to five per cent of the population (Sattler, 1982).

In schools, programming for the gifted has developed into programming for the gifted and talented, an additional category that expands the definition considerably. Erlich (1982) defined giftedness by the following:

By giftedness we mean intellectual prowess such as is evidenced by scores on conventional intelligence tests, and which is characterized by an ability to see and group relationships, proficiency in verbal

abstract thought, persistence, intellectual curiosity, versatility, and adaptability and creative thought. By talent we mean any specialized skill or ability in a particular field of endeavor, such as the creative and performing arts and sports, where the behavior involves some physical component of muscular coordination, visual acuity, manual dexterity, etc. (p.29).

Others have taken a more restricted approach to the concept as seen by a definition offered by Clark (1983). Clark stated that giftedness is "a high level of intelligence that results from the advanced and accelerated integration of functions within the brain, including physical sensing, emotions, cognition, and intuition" (p.6). This latter definition carried a listing of new terms that clearly made observation of giftedness a problem.

With increased national awareness developing over gifted education in the mid to late 1970's, legislators began appropriating funds for special programs. A positive side effect of this political attention was the development of a definition that could be used by all. The Gifted and Talented Act of 1979 defined gifted and talented children as being those

children and, whenever applicable, youth who are identified at the preschool, elementary, or secondary level as possessing demonstrated or potential abilities that give evidence of high performance capability in areas such as intellectual, creative, specific academic, or leadership ability, or in the performing or visual arts, and who by reason thereof, require services or activities not ordinarily provided by the school (Sec. 902, Title IX, Part A).

With this definition as a framework, basic problems arose regarding precise definition of a number of terms such as "high performance capability" as well as "intellectual, creative, and leadership ability."

Because of the impact that the federal definition had on program development (due to funding), acceptance of the above definition became widespread. Elements of the federal definition can be seen in Virginia's definition, the one which has been accepted by school divisions for the past seven years. This definition has become an operational definition of giftedness for the state, one which Passow (1980) stressed as being needed:

Gifted students are those students who are identified through multiple criteria by professionally qualified persons at the kindergarten, elementary, and secondary levels as possessing abilities, talents, and potentials which are so outstanding that they require special provisions inclusive of and beyond those available in the non-differentiated classroom (Virginia Department of Education, 1983, p.1).

In the stated plan, "abilities" have been described as being in the following categories: general intellectual, specific academic, visual and performing arts, practical arts, psychosocial, and creative and productive thinking.

Identification Procedures

Ehrlich (1980) reviewed the status of programs for the gifted in public schools and found that most programs have been started at the upper elementary level and that very few were designed to serve children below the age of eight. Reasons given for the delay in programming, ironically, were

found in the philosophy of the early childhood movement itself, and in research on intelligence tests. With regard to the early childhood movement, she found that programs had been developed using theories of readiness and development which led to an emphasis on the average maturational levels for the young child. As a result, daycare centers, Head Start, and other such programs developed curriculums which were geared to the typical four, five, or six year old. She also stated that earlier studies of the stability of intelligence as measured by the Stanford-Binet were interpreted to indicate that reliability was in question when young children were tested as low correlations with later IQ scores were found.

Hartsough, Elias, and Wheeler (1983) reported another reason for the delayed process was that teacher referrals were an essential part of the identification procedures, and that referrals were typically not made until the child reached the fourth or the fifth grade. In another study typical of those in which identification procedures were outlined, Dirks and Quafoth (1981) presented arguments concerning two kinds of identification procedures for fourth graders - the issue of age, it seemed, was never questioned.

With the passage of the Virginia Plan for the Gifted, these long established procedures have had to change. Indeed, Ehrlich (1980) observed the phenomenon by stating that "a major problem in identifying giftedness during the early years is overcoming established convictions that the process of identification cannot be successfully applied to the very young" (p.3).

Ashman and Vukelich (1983) reported that teachers were extremely influential in deciding which students were nominated for placement into gifted programs. Teacher nomination was cited as being the most widely used source of referral. This source, although the most widespread, was not found to be the most accurate as estimates of teacher effectiveness ranged from ten to

forty-eight percent. Other studies have reported similar findings (Gallagher, 1966; Jacobs, 1971; Renzulli et al., 1976).

The use of multiple criteria in identifying children for talented and gifted programs has been widely recommended (Clark, 1983; Dirks & Quafoth, 1981; Jacobs, 1971; Hartsough et al., 1983; Karnes, 1983; Renzulli et al., 1976; Torrance, 1984). Regardless of how "gifted" is defined or the age of the student involved, various researchers have stressed the importance of receiving information about the student from a number of sources to obtain as broad a picture of the child as is possible. Information from group ability tests, teacher reports, achievement scores, and performance ratings on measures of creativity are typically included for school age referrals (Clark, 1983; Sattler, 1982).

Parent Information

What has often been omitted from the identification process is a type of parental report. This omission has been noted in programs which based the majority of referring information on school sources. At the upper elementary level, sufficient information has been found in cumulative folders to make decisions about placement as test scores, grades, and teacher reports were readily available.

A factor contributing to the lack of parental input was reported by an administrator of gifted programs (Ehrlich, 1980). She stated that as the Director of Gifted Programs in New York City Public Schools, she used to keep records of conversations with parents of their gifted children. These records enabled her to note that a consistent pattern of behaviors emerged - one of advanced verbal, math, and reading skills, curiosity, preference for older friends, a tendency to be self-taught, boredom with school, phenomenal

memory, and maturity above age level. These characteristics have now become recognized characteristics of the gifted, but they were easy to dismiss at that time because the parents were considered biased and not "professionally informed". Ehrlich went on to describe a highly successful preschool program for gifted children which identified them at three years and eight months for placement at age four. Included in this project (and in four others) were means of parent nomination or other means of receiving parental information.

The importance of receiving parental information was again stressed by Erlich in a later article (McHardy, 1983). This paper presented the highlights of a planning conference in Louisiana which was developed as a direct result of legislation in that state which had established mandatory programs in public schools for gifted preschoolers. In explaining how to develop a successful program for these young children, she stated that the New York program's success was due to the fact that parents had been involved in the program from the beginning, and that they were able to contribute in the identification process. In that same conference, Katz described a summer program for gifted pre-schoolers in Denver. Children were selected for this program by testing and by an extensive interview with the parent. Khatena (1978) included a parental report when describing multiple criteria which should be used in the identification of the creatively gifted. The importance of a parent's perspective was summarized by the following statement: "the parent of a gifted child is the single most significant person in the child's life, and by far the most potent lead to the child's attempts to realize his full potential" (p. 266). Other authors (Tuttle & Becker, 1983) explained that parental identification measures were better able to observe the child more naturally, in a relaxed and informal setting. They emphasized that the gifted often performed best in a more nat-

ural environment rather than in a classroom where there was often pressure to conform.

Lichenstein and Ireton (1984) have incorporated parental input for a preschool screening program which was designed to help children with educational problems. They observed that screening testing provided only a limited picture of the child, and their rationale for including information from the parents also applies to the gifted:

Information uniquely available to parents may help to compensate for the limitations of screening tests. Only certain kinds of behavior can be evaluated by testing. Information gained from a test may be inaccurate, and it is certain to be limited. A child's parent, having observed how the child actually behaves in many different situations, from the supermarket to the supper table to the backyard sandbox, can supply information that a test cannot provide. Parents are therefore a source of critical information about their children (pp. 78-79).

Gunderson, Maesch, and Rees (1987) also realized the parents' ability to identify giftedness as a result of their children's reaction to the pressures of school performance. In an article which described an identification process for the gifted learning disabled, they stated that the learning disabled students are often missed by procedures which include testing because they often do poorly on group administered ability and achievement tests. In spite of their superior ability, these students typically receive only average grades which do not distinguish them from the rest of the population. These authors stated that a way to avoid missing these exceptional students was to involve the home

in the identification process because "listening to and involving parents may provide a truer evaluation of skills, abilities, and frustrations than is otherwise apparent" (p.160). The importance of the home as an information source has been well established in other research (Clark, 1983; Hall & Skinner, 1980; Torrance, 1980). Fisher (1978) however, reported another aspect of the identification and labeling issue and in so doing, raised the issue of two way communication about the gifted. In a study of the impact of the gifted label, she reported that the label given to the child by the school system was not as significant as the parent's perception of their child's giftedness.

Directions for Research

Gowan (1975) reviewed fifty years of history in the gifted child movement and concluded by stating that additional research was needed for significant advances to be made in the field. A call was made for research in the areas of creativity and development. Ehrlich (1980) later stated:

The spurt of interest in the gifted during recent years has produced several checklists and rating scales purporting to be identification instruments for the gifted. The disadvantage in these claims lies in the fact that there is little evidence of their reliability or validity for the purpose. There is no good study that validates these lists for the modern child (p.21).

The Parent Checklist for New Kindergarten Pupils is an effort to develop "one good study". Three remaining studies and one book will be reviewed to highlight specific areas. While none of these studies is being replicated, each has played an important part in the development of the present study.

Rimm (1984) has described the PRIDE, a Preschool Interest Descriptor that was developed as a parent report inventory to determine interests of gifted preschoolers. A high reliability coefficient was found (.92) and content validity was established based on research of characteristics of preschoolers and kindergarten students "as reported in different papers" (p. 185).

In an unpublished dissertation, Frinier (1978) described a process by which parents reported, in retrospect, characteristics of their children who had been identified as being gifted. In this study, the author was questioning parents in an attempt to include as many characteristics of giftedness as possible in order to identify giftedness in another younger group of students. Parents reported many of the traditional aspects of giftedness such as a large vocabulary, curiosity about many things, early language development, well-developed memory skills, early reading and writing abilities, and a good sense of humor. They also reported that as young children, their own youngsters were more sensitive to others than their playmates, and also that their children maintained eye contact with adults at an early age. These parents also stated that their children demonstrated a realization of danger when they were quite young.

Schmidt and Perino (1985) described a kindergarten screening process which was successfully used to screen for both high achievers as well as those who were at risk for failure. In this study, a kindergarten language, perceptual-motor, and drawing test was administered to approximately 400 children. The results of this screening test were studied to determine whether they accurately predicted achievement and ability by the end of the second grade. Discriminant analysis revealed that a certain combination of tests would account for 77% of students identified for special education services, and for 73% of students identified as being high achievers.

Hall and Skinner (1980) wrote a book for parents to use as a means of identifying giftedness at the preschool level. In that book, a table of items was presented that could be used as a checklist. This table was constructed along a developmental continuum that established the criteria of thirty percent more advanced (by expected age level accomplishments) as being an indicator of giftedness.

The Parent Checklist encompasses all of these ideas and attempts to refine the criteria used to identify giftedness and to strengthen statistical properties of the instrument. The present study will attempt to broaden the base of knowledge about child development, early identifiers of giftedness, and parental involvement in the identification process by the construction and validation of an instrument with demonstrated reliability and validity.

Chapter III

METHODOLOGY

Population And Selection of the Sample

The sample for this study was drawn from the kindergarten class of a suburban school system in central Virginia and consisted of approximately one thousand four hundred students. The kindergarten class (the Class of 1997) was considered to be representative of the entire school system with regard to socio-economic and racial composition. At the time the sample was drawn, the mean composite score for both the second and fourth grade SRA Achievement Tests was placed at the seventy-second percentile. The composite score was a combined score in reading, language arts, and mathematics.

Procedures

The data for this study was gathered from six instruments over a period of time which extended from April, 1984 to April 1988. During this period of time the original sample of 1400 was reduced to 955 due to movement of families away from the school system. Six instruments were utilized - the Parent Checklist for New Kindergarten Pupils, the Metropolitan Readiness Test, the Torrance Tests of Creative Thinking: Figural, The Scales for Rating the Behavioral Characteristics of Superior Students, the Science Research Associates (SRA) Achievement Series, and the Otis-Lennon School Ability Test.

The Parent Checklist for New Kindergarten Pupils (Parent Checklist) was distributed to all parents who enrolled kindergarten students from Kindergarten Registration Day on April 25 to the opening day of school September 3, 1984. Parents were instructed to rate their children's skills in eleven categories and to answer eight questions pertaining to special interests, special needs, the language spoken in the home, the number of siblings of the kindergarten student, and whether or not the child attended a preschool program. Parents were asked to complete the form after registering their child and to return the form to the school no later than opening day. The Parent Checklists were collected from the schools and scores from them were recorded by computer in the school system's administrative office. In the spring of the Kindergarten year, the Metropolitan Readiness Test (MRT) was administered.

The MRT was a nationally standardized group measure of readiness skills in reading and mathematics which yielded scores in auditory, visual, language, and quantitative areas. These tests were administered by the classroom teacher in April according to standardized procedures outlined in the teacher's manuals. The tests were scored by the teachers at the end of the testing period and the scores were recorded at the central office during the month of May. Utilizing a computer procedure, the student's scores from the two instruments were then compared and matched. Of the two thousand and ten enrolled students, one thousand four hundred and thirty had score for both of the measures. This group of approximately fourteen hundred students constituted the kindergarten sample for this study. The remaining students did not have all of the test data due to a variety of reasons which included late enrollment, absences during testing periods, transfers, or failure to complete and return the Parent Checklist.

The next two instruments (the Torrance Test and the Scales for Rating the Behavioral Characteristics of Superior Students) were administered to a sub-sample of the children the following school year, while the students were in the first grade. A stratified random sample of seventy-eight students was drawn from four schools and was evaluated with the Torrance Tests of Creative Thinking: Figural (Torrance Test) and the Scales for Rating the Behavioral Characteristics of Superior Students (SRBCSS). The school system and the subsample were matched as closely as possible with regard to sex, race, percentage of students in lower socio-economic status (as indicated by percentage of students receiving free or reduced price lunch), and percentage of students living with both parents. The data for the district and the subsample were shown in Table 1.

Table 1

Demographic Data Shown in Percentages

	Sex		Race		Low SES	Intact Families
	M	F	Majority	Minority		
School District	51	49	76	24	16	70
Sample	50	50	77	23	18	73

Because the SRBCSS was a teacher rating scale, this data was gathered during the second semester (April, 1986) to allow teachers ample time to observe the students and to become familiar with them. The Torrance Test was a nationally standardized group test of creativity. The Figural Form was chosen (as opposed to the Verbal Form) due to the ages of the children, and also due to the nature of the test itself - a drawing test was believed to be more

appropriate for first graders than a test which required written responses. The test was composed of a series of three different drawing tasks, and was scored for measures of fluency, flexibility, originality, and elaboration. The SRBCSS was a nationally standardized rating scale widely used to aid in the identification of gifted students. The instrument contained ten scales which allowed teachers to rate their students in the areas of learning, motivation, creativity, leadership, artistic, musical, dramatics, communication (precision and expressiveness), and planning skills. Both the Torrance Tests and the SRBCSS were administered and scored according to standardized procedures established in the test manuals. In all four of the schools selected for the subsample, the Torrance Tests were administered first, and the rating scales were completed by the end of the following week.

The Science Research Associates (SRA) Achievement Series test was administered to the entire second grade in the spring of 1987 as part of the county testing program. The SRA was a nationally standardized achievement test which measured reading, mathematics, and language skills. Like the Metropolitan Readiness Tests, the classroom teachers administered these tests following the administration procedures as outlined in the test directions. The tests were scored in the school division utilizing both an optical scanner and a computer program written specifically for that purpose. Scores from these tests were recorded on the school division's computer recordkeeping system, and the scores from kindergarten through the second grade were then matched. Through the process of matching students who had been in the school division since kindergarten, the second grade sample size was reduced to 1036 students.

The Otis-Lennon School Ability Test was administered during the winter of 1988 when the Class of 1997 was in the third grade. The test was

administered by classroom teachers using standard procedures. Again, the tests were scored locally and scores recorded in computer files in an identical manner as the SRA. When scores for this group of students (the Class of 1997) was matched with all who had been tested with all other instruments since kindergarten, the sample size was reduced to 955.

Ethical Considerations

Three ethical concerns involved in this study were confidentiality of test results, parental access to test information, and proper test administration. The confidentiality of the test scores was maintained through the storage of test data on computer files in the school system's central office. Access to the data was restricted to three personnel who routinely programmed the computers to obtain such information. Access to the testing information in the schools was restricted by keeping the data in each child's confidential (cumulative) folder. These folders were routinely kept in locked files in each school office. The second concern, that of parental access to test information, involved handling the scores as any other confidential information in the cumulative folders - parental access was available upon request. Additionally, the examiner made interpretive conference available to any parent upon request. The final concern, that of proper test administration, involved the examiners following administration practices as established in the examiner's manuals. The examiners involved in the MRT, SRA, and OLSAT were experienced classroom teachers who routinely gave the tests as part of the state and county testing programs; these teachers were supervised by the building principals. Individuals administering the Torrance tests were either the testing specialist for the system or were teachers of talented and gifted students who had attended special training sessions for the administration and

scoring of these tests. In all instances, test administration was conducted in accordance with standardized procedures established in the test manuals.

Instrumentation

The Parent Checklist for New Kindergarten Pupils is a developmental measure that required parents to rate eleven skill areas along a five point continuum in a Likert-scale fashion. The instrument was designed to have average (four and one half to five year level) ratings at the midpoint of each scale. The eleven areas included the following skills: reading, motor development, language development, observation of environment, identification and order, thinking and problem solving, attention and concentration, memory and directions, curiosity, social skills, and independence. Scores at the extreme left side of the scale were considered to be significantly delayed, and scores at the extreme right side of the scale were considered to be significantly advanced for a kindergarten student.

The MRT (Nurss & McGauvran, 1976) was a nationally standardized group measure of readiness skills. The test was published to assess these skills during kindergarten through the beginning of the first grade. Level two of the test was used for this study; this level measured auditory, visual, language, and quantitative skills. The Auditory area was composed of two subtests - Beginning Consonants and Sound - Letter Correspondence. The Visual tests included Visual Matching and Finding Patterns. Language involved School Language and Listening, and the Quantitative scale included two tests - Quantitative Concepts and Quantitative Operations. Ravitch (1985) reviewed the MRT and described the test as being one which was well-developed. He stated that the test should continue to be used to measure school readiness. The instrument was standardized on 28,000 students from approximately 260

school districts. A stratified random sample for school districts was selected for norming purposes, and the sample was controlled for ethnic, gender, socioeconomic status, size of school, and geographic region of the country. Reliability coefficients were determined by the use of the split-half method and by the Kuder-Richardson formula. Coefficients of .95 and .94 were found for these two methods, respectively. In a standard text widely used in the area of testing and measurement, Brown (1970) has stated that measures of achievement or test of academic skills should have reliability coefficients of .90 or higher, indicating that the Metropolitan did possess a high degree of reliability. Two types of validity were reported for the MRT - content validity and predictive validity. Content validity was determined by a process which used a sequential arrangement of tasks shown to be necessary for the development of reading. Items measuring these tasks were included in the final edition of the test through the use of item analysis procedures in two different portions of the test development process. Predictive validity was determined by correlation studies of the MRT with the Metropolitan Achievement Test and with the Stanford Achievement Test. For both studies, the MRT was administered in the fall of the first grade, and the achievement tests were administered in the following spring. Both test samples were randomly selected, and each consisted of approximately 2,000 students. The correlation between the MRT Composite Score and the Metropolitan Achievement Tests for Total Reading and Total Math were .72 and .73, respectively. A slightly higher correlation (.78) was reported for the MRT Composite Score and the Total Battery of the Stanford Achievement Test.

The Torrance Tests of Creative Thinking (Torrance, 1966) was developed to measure creative thinking abilities as opposed to the construct "creativity" alone. Figural Form A was utilized in this study. This particular test required

students to complete three separate tasks: Picture Construction, Picture Completion, and Parallel Lines. The Picture Construction subtest required the students to place a brightly colored egg shaped form anywhere on their papers and to develop a picture from it. The Picture Completion Test required the student to complete various drawings after being given prompts of lines or line segments varying in length. The final test, Parallel Lines, required the students to complete pictures utilizing the lines any way they believed to be appropriate. The Torrance Tests (Figural Form A) were normed on 11,000 students, ranging from kindergarten through graduate school. In the initial study, 1,132 kindergarten and first grade students participated. In the Norms-Technical Manual, Torrance (1974) reported that the norm group was "multi-racial and multi-ethnic and is intended to be representative of the mid-range of most school populations" (p. 48). Efforts were made to exclude special populations (including the gifted) which could have influenced test results. For a discussion of the reliability and validity for the Torrance Tests, Torrance (1974) has stated that the nature of creativity alone has caused serious problems with these traditional testing concepts. He has described creativity as being a process and not a "pervasive, unitary function" (p. 21). He has cited three major factors which have a significant impact on reliability - the psychological states involved in the creative process, the impact of educational experiences, and the level of motivation. Because these factors would have an impact on test-retest studies, he has cautioned against interpreting lowered reliability coefficients as being indicators that the tests were somewhat lacking or that they were unreliable instruments. With regard to validity, he stated:

Since a person can behave creatively in an almost infinite number of ways and since there is a diversity of definitions of creativity, it is impossible to provide all researchers and potential users of tests of creative thinking satisfactory evidences of validity. The concept of an overall validity coefficient for tests of creative thinking is grossly inappropriate (p. 21).

Despite the problems mentioned above, review of the Torrance Tests have concluded that they possess adequate reliability and validity. In The Ninth Mental Measurements Yearbook, Treffinger (1985) has stated that the tests possessed "reasonable reliability for group and research application" (p. 1633). He reported reliability coefficients ranging from .50 to .93, and stated that there were very few findings that were lower. Further he has reported that the tests were valid as measurements of creative thinking as they have been positively correlated with various aspects of creative thinking such as leadership, dramatics, and teacher rating scales for creative behaviors. He also noted that the tests have been found to be significant predictors of later achievements in creativity with studies involving various periods of time, up to twenty-two years.

Other problems with the Torrance Tests have been noted, and particular attention has been given to the scoring procedures (Chase, 1985; Treffinger, 1985). Described as being tedious and cumbersome, the original procedures have been revised to a streamlined procedure. In the original scoring, for example, the scorers would have to count every single detail that a child placed on a picture in order to come up with a rating of the dimension of elaboration. The revised procedures (Torrance & Ball, 1984) have allowed the scorers to

estimate the number of such details and rate the child's performance by groupings of the estimations, rather than by the actual number. The reliability of the scoring process has also been studied, and the use of the new procedures has resulted in reliability coefficients that were quite high. Correlations between scores were reported to range from .86 to .99.

The Scales for Rating the Behavioral Characteristics of Superior Students (Renzulli, Smith, White, Callahan & Hartman, 1986) were written to provide teachers with a systematic approach to identifying gifted students. The scales were designed to be used at all grade levels and may be quickly completed and scored. There were ten different scales included in the instrument however, the authors have stated that all ten scales did not have to be given to obtain reliable results. The authors have indicated that the first three scales (Learning, Motivational, and Creativity Characteristics) typically covered the characteristics of children placed in programs for the gifted. The remaining scales (Leadership, Artistic, Musical, Dramatics, Communications - Precision, Communication - Expressiveness, and Planning Characteristics) are included to provide for additional information so that use of the scales could be tailored for varying program objectives. Eight of the scales were used for this study with Artistic and Musical Characteristics being omitted.

Renzulli et al. (1976) stated that the scales were field-tested in New England in school districts that included "a variety of socio-economic, ethnic, and racial backgrounds" (p. 7). Urban, suburban, and rural schools were included in the studies. There was no mention made of the sample size, and references were only made to students in grades 4-6. The manual reported that the reliability of the instrument was high as indicated by the stability of ratings over a three month period of time. Indeed, the coefficients of stability ranges from .77 to .91 for the first four scales as reportedly used by fifth and

sixth grade teachers. Inter-judge reliability coefficients on the same sample ranged from .67 to .91 with the remaining two values being placed in the eighties. Validity of the SRBCSS was determined by a number of methods, depending upon the particular scale in question. The first method utilized the first four scales in an effort to discriminate between students previously identified as being average and students already placed in gifted programs. The data was analyzed by an analysis of variance procedure and significant differences in scores were found between the two groups in the areas of learning, motivation, leadership and creativity. The next procedure compared scores on the Learning, Motivation, and Creativity Scales with published intelligence, achievement, and creativity tests. Again, significant correlations were found in all areas with the exception of the non- verbal creativity measures. The Leadership Scale was then compared with teacher and peer ratings of three dimensions of leadership, with significant correlations being found for the fourth and fifth grades, but not for the sixth. In 1985, the SRBCSS was reviewed for inclusion in The Ninth Mental Measurements Yearbook. In two separate reviews, E.N. Argulewicz and J.O. Rust stated that the instrument possessed strengths in its usefulness as an instrument used to identify the gifted.

The SRA (Science Research Associates, 1978) was a nationally standardized achievement test. For this study, Level C was administered, and this particular level of the test was written to measure general achievement in grades two and three. This particular test measured achievement in three areas of reading as represented by the Letters and Sounds, Listening Comprehension, and Comprehension subtests; two areas of mathematics included in the Concepts and Computation subtests; and two areas of language as defined by the Usage and Spelling subtests. Robertson (1985) reviewed the SRA and

reported that the size of the standardization group was adequate (approximately 106,000 for fall and 71,000 for spring), and that the sample was intended to be representative of the nation with regard to geographic regions and school division size. His analysis of the sampling procedures found that the sample did, indeed, approximate the nation in terms of ethnicity, and type of community; however, he did report a weakness in constructing the sample in that the socio-economic status of the participating school divisions was not systematically addressed. Statistical data on the SRA was said to be quite good, with both Kuder-Richardson reliability coefficients and alternate forms reliability coefficients exceeding .90. Individual subtest coefficients for Level C were somewhat lower and extended downward to the .60-.80 range, leading the reviewer to conclude that the individual subtest scores should be used with caution. Validity information was presented by correlating total scores with grades earned and with other nationally standardized achievement tests. The coefficients with grades were described as being .66 to .72 for the entire battery, scores which were supportive of validity of this type. Correlations with other tests ranged from .70 to .90, which indicated satisfactory levels.

The Otis-Lennon School Ability Test (Otis & Lennon, 1979) was described as being one of "the most frequently used group intelligence tests in U.S. schools" (Oakland, 1985), and measured, in general terms, intelligence and the ability to achieve in school. Standardization utilized a stratified random sampling procedure of 130,000 students which closely approximated current census figures with respect to racial-ethnic composition, socio-economic status, geographic region, and enrollment in public and private schools. The test's reliability was considered to be quite strong, with K-R 20 coefficients ranging between .90 and .95 for the age levels sampled and .88 to .94 for grade levels within the sample. The stability of the instrument over a

six month period of time was determined on almost 200 to 400 students per grade level, and test-retest correlations ranged from .84 to .92. Content validity was determined to be suitable, based upon a reading of the tests. Criterion-related validity was determined by correlating the test with other recognized ability tests such as The Scholastic Aptitude Test, The Differential Aptitude Test, The Wechsler Intelligence Scale for Children - Revised, and the Stanford-Binet; these correlations ranged from .58 to .84. Correlations with nationally normed achievement tests such as the California Achievement Test and the Metropolitan Achievement Test were somewhat higher, ranging from .78 to .89. Overall, the reviewer concluded that the Otis-Lennon demonstrated high standards in its standardization and in its technical properties.

Design

The study was a predictive validity study. The main purpose of the study was to develop the instrument and to determine the validity of the Parent Checklist for New Kindergarten Pupils for predicting giftedness in kindergarten children.

Research Questions

Three major questions and five subsidiary ones were investigated, as follows:

1. Is the Parent Checklist for New Kindergarten Pupils (PCL) a reliable instrument?
2. Are parents reliable sources of information for school personnel when asked to describe characteristics of their preschool children?
3. Does the PCL predict placement into programs for the gifted?

The five subsidiary research questions were:

1. Is there a positive correlation between scores on the PCL and scores on the Metropolitan Readiness Test?
2. Is there a positive correlation between scores on the PCL and scores on the Scales for Rating the Behavioral Characteristics of Superior students?
3. Is there a positive correlation between scores on the PCL and scores on the Torrance Tests of Creative Thinking?
4. Is there a positive correlation between scores on the PCL and scores on the SRA Achievement Tests?
5. Is there a positive correlation between scores on the PCL and scores on the Otis Lennon School Ability Test?

Reliability

The internal consistency of the scale was determined by both Cronbach's Alpha and the Spearman-Brown Prophecy formula. Item reliability was also determined by correlating students' scores on individual items with their total scores. Another measure of test-retest reliability of the instrument was obtained through the use of a subsample of the 1985-86 kindergarten class. A random sample of seventy-five children was drawn and the parents were asked to rate the children with the same instrument after an eight week interval. The scores for each of the eleven scales were then compared and analyzed.

Validity

The validity of the PCL as a predictor of placement into programs for the gifted was determined by multiple regression analysis. The hypotheses were tested at both the .01 and the .05 levels of significance.

Construct Validity

The construct validity of the instrument was determined by the use of a recognized panel of judges. These individuals, specialists in the fields of child development, special education, and gifted education were asked to rank order each of the fifty-five cells of the Parent Checklist to determine the validity of each item. The procedure involved a two-part process, as follows: each scale of the checklist was cut into the five different cells which represented each developmental level. The cells were placed into envelopes which identified the particular scale; that is, the five cells for the Reading Scale were placed into an envelope marked "Reading", the five cells for the Motor Development Scale were placed into an envelope marked "Motor Development", and so on until eleven different envelopes were prepared for each judge. The judges were given the envelopes and were asked to rank the cells from the lowest to the highest ages represented. After the ranking process was completed, the judges were then given a completed scale and were asked to comment on the face validity for the total instrument.

CHAPTER IV

ANALYSIS OF RESULTS

The Parent Checklist for New Kindergarten Pupils (PCL) was validated as part of this study. The analysis of the checklist as an instrument began with certain assumptions about its reliability and validity; that is, that the instrument was a reliable and valid one which could be used by parents to assess their children in several developmental areas, and that the parents would be reliable sources of information for school personnel. Further, it was also hypothesized that the checklist would be positively correlated with other instruments used to measure certain characteristics of the young child. Specifically, the study investigated three major research questions and four subsidiary ones. The major research questions were:

1. Is the PCL a reliable instrument?
2. Are parents reliable sources of information for school personnel when asked to describe characteristics of their preschool children?
3. Does the PCL predict placement into programs for the gifted?

The subsidiary questions which arose when investigating the major questions were:

1. Is there a positive correlation between the PCL and the Metropolitan Readiness Test?
2. Is there a positive correlation between the PCL and the Scales for Rating the Behavioral Characteristics of Superior Students?
3. Is there a positive correlation between the PCL and the Torrance Tests of Creativity (Figural)?
4. Is there a positive correlation between the PCL and the SRA Achievement Tests?
5. Is there a positive correlation between the PCL and the Otis-Lennon School Ability Test?

The Parent Checklist for New Kindergarten Pupils was constructed to allow parents to rate their children in the traits of reading, motor development, language development, observation of environment, sorting skills, problem solving, attention and concentration, memory and directions, curiosity, social skills, and independence. Located within boxes or cells, five sets of descriptive phrases indicating a "low" to a "high" degree of the trait were placed beside each trait so that parents could indicate which set of phrases most accurately described their preschool child. Parents were asked to indicate which set of descriptors most closely described their child by checking a box in the lower right hand corner of the cell. For scoring purposes, (scores were given to items after the checklists were completed by the parents) numeric values were attached to each group of phrases so that low scores were counted as 1, and the highest possible scores were counted as 5. A score of 3 was intended to indicate a level of the trait which was developmentally appropriate for a 4-5 year old child.

Table 2 shows the means and standard deviations for the PCL for 1574 students. Mean scores ranged from a low of 3.04 in Reading to a high score of 4.78 in Observation of Environment. The standard deviations ranged from .53 in Observation of Environment to .94 in Attention and Concentration.

Table 2

**Mean Scores and Standard Deviations for the
Parent Checklist for New Kindergarten Students**

Trait	Mean	Standard Deviation
Reading	3.04	.93
Motor Development	4.06	.81
Language Development	4.15	.73
Observation of Environment	4.78	.53
Identification & Order (Sorting)	3.93	.78
Thinking and Problem Solving	4.49	.75
Attention and Concentration	4.04	.94
Memory and Directions	3.90	.91
Curiosity	4.59	.61
Social Skills	4.30	.81
Independence	4.36	.81

Major Research Question 1. Is the Parent Checklist for New Kindergarten Pupils a reliable instrument?

To determine the reliability of the Parent Checklist, a measure of internal consistency was calculated by the determination of Cronbach's Coefficient Alpha. Utilizing the SAS PROC CORR procedure, the coefficient for raw variables was found to be .63, a moderate degree of reliability. Intercorrelations between individual scales and the total score were also calculated, and the results are reported in Table 3.

Table 3

**Intercorrelations between Scales of the
Parent Checklist for New Kindergarten Pupils**

Parent Checklist Scales

	Read ing	Mtr Dev	Lang Dev	Obs Env	Ident &Ordr	Thnk PrSv	Attn &Con	Memy &Dir	Cur sty	Soc Sk1	Ind epn
Total											
PCL	.63**	.56**	.62**	.49**	.73**	.69**	.62**	.72**	.51**	.58**	.53**

**p<.01 n=1421

The correlations, which were all significant at the .01 level, ranged from .49 in the Observation of Environment scale to .73 in the Identification and Order scale. These correlations were considered to be low to moderate.

Test-retest reliabilities were then gathered to assess the checklist's stability over time. Sixty-three parents were randomly selected by taking every twenty- fifth name from a list of all students evaluated with the checklist. Of these sixty-three, forty-seven responded for an overall response rate of 75%. Pearson Product Moment Correlations were determined for this group, and the results are reported in Table 4.

Table 4

**Eight Week Test-Retest Reliabilities of the
Parent Checklist for New Kindergarten Pupils**

	1	2	3	4	5	6	7	8	9	10	11	Total
1 Reading	.64**											
2 Mtr Dev		.42**										
3 Lang Dev			.44**									
4 Obs Env				.003								
5 Id & Ord					.46**							
6 Th & P S						.26						
7 At & Con							.35*					
8 Mem & Di								.38**				
9 Curiosit									.58**			
10 Soc Skil										.42**		
11 Independ											.24	
Total												.54**

**p<.01 *p<.05

For the test-retest correlations, significance was noted for the total score and for eight of the eleven scales (one at the .05 level). Again, low to moderate levels of correlation were found. The Reading scale was noted to have the highest correlation, followed by the Curiosity scale and the Total scale.

Major Research Question 2. Are parents reliable sources of information for school personnel when asked to describe characteristics of their children?

Data for this question were gathered from the frequency distribution of scores for the Parent Checklist. Because the descriptors within each scale of the checklist described an increasing continuum of skills, it would be possible for a parent to read the descriptors and "fake good" when indicating their child's levels of skills. Following this line of reasoning, it would have been easy for a parent simply to mark all boxes down the right margin of the checklist thereby indicating "advanced" levels of skills for their child. Of the 1582 checklists, twelve were rated as being the highest possible score in all

Table 5

Mean Scores, Standard Deviations, and *t*-Test Results for the Parent Checklist for Advanced Learners and Mainstream Students

	Advanced Learners		Mainstream Students		<i>t</i> -test results	
	\bar{X}	SD	\bar{X}	SD	<i>t</i>	P
Reading	3.96	.69	3.00	.92	11.5	.0001
Motor Development	4.17	.68	4.05	.81	1.49	.1391
Language Development	4.52	.50	4.13	.74	6.45	.0001
Observation of Env.	4.88	.36	4.77	.53	2.53	.0128
Ident. & Order (Sorting)	4.51	.53	3.90	.78	9.58	.0001
Thinking & Problem Solv.	4.74	.50	4.48	.76	4.32	.0001
Attention & Concentration	4.46	.72	4.02	.95	5.10	.0001
Memory & Directions	4.53	.68	3.86	.91	8.07	.0001
Curiosity	4.80	.40	4.58	.62	4.50	.0001
Social Skills	4.50	.62	4.29	.82	2.77	.0069
Independence	4.49	.74	4.36	.81	1.48	.1430
Total	4.51	.35	4.12	.49	9.20	.0001

**p<.01 *p<.05 n=77 n=1505

While the mean scores for the advanced learners were higher in all areas, significant results of the *t*-test were noted for the total checklist and for nine of the eleven scales. The mean scores of the Motor development and the Independence scales did not differ significantly between the two groups of students, while the total scale and the remaining nine scales did show significant differences. This finding indicated that there were significantly higher scores for the advanced students on the total checklist and on the majority of the scales within the checklist. Parental ratings for the traits measured by the checklist were generally consistent with later identification of advanced learners as compared to the rest of their class. While this comparison alone does not reveal significant differences in mean scores for both groups in all of the scales of the checklist, the pattern lends credibility to the notion that parental perceptions are highly related to perceptions of the same students by school personnel.

Major Research Question 3. Does the Parent Checklist predict placement into programs for the gifted?

To determine whether or not the Parent Checklist could be used to predict placement into programs for the gifted, multiple regression analysis of the checklist was completed. Placement into the "PAL" program could occur at any point in kindergarten through third grade, and placement into the TAG program began in the fall of grade four. Therefore, the analysis of the checklist was done in two stages controlling for the availability of test data at the time of possible placement. Analysis of first grade data included the testing information of the PCL, the Metropolitan Readiness Test, the Scales for

Rating the Behavioral Characteristics of Superior Students, and the Torrance Tests of Creativity; these results were available by the end of grade one, and are shown in Table 6.

Table 6
Multiple Regression Analysis of the Parent Checklist
for PAL Placement Utilizing Kindergarten - First
Grade Assessments

Variable	Source	(Gr)	Beta	Correlation Coefficient	Stepwise Multiple Correlation	Stepwise R ²	R ² Increment
Motivation	SRBCSS	(1)	.390	.43**	.44	.19	
Listening	MRT	(kg)	.247	.30**	.50	.25	.06

**p<.01

These results indicate that the Parent Checklist was not a significant predictor of PAL placement by the end of the first grade. The best predictor was the motivation of the student as rated by the first grade teacher utilizing the Renzulli scales. The Motivation scale of the SRBCSS was positively correlated ($p < .01$) with PAL placement with a multiple correlation of .44, accounting for 19% of the variance. The next most significant predictor was the student's performance on the Listening subtest of the Metropolitan Readiness Test, which accounted for an additional 6% of the variance.

For the next analysis, the results of the second grade achievement test battery (the SRA Achievement Series) was allowed to enter the process of identifying PAL students. These results are shown in Table 7.

Table 7
Multiple Regression Analysis of the Parent Checklist
for PAL Placement Utilizing Kindergarten - Second
Grade Assessments

Variable	Source	(Gr)	Beta	Correlation Coefficient	Stepwise Multiple Correlation	Stepwise R ²	R ² Increment
Composite	SRA	(2)	.514	.55**	.51	.26	
Motivation	SRBCSS	(1)	.324	.43**	.56	.31	.05
Reading	PCL	(p-kg)	-.233	.28**	.58	.34	.03
Lang Devel	PCL	(p-kg)	.225	.15**	.61	.38	.04
Planning	SRBCSS	(1)	-.250	.34**	.63	.40	.02
Qualit Con	MRT	(kg)	.140	.30**	.65	.42	.02

**p<.01

When second grade scores were allowed to enter the multiple regression calculation, the alignment of the predictor variables changed. This change allowed two of the Parent Checklist scales to enter the equation. The Composite score of the SRA (a combination of reading, language arts, and mathematics) was the first predictor of PAL placement, accounting singly for the greatest amount of variance (26%). Motivation from the Renzulli Scales entered next, while Reading and Language Development from the Parent Checklist entered at steps three and four, respectively. Planning skills as measured by the Renzulli entered at the fifth step, and the Qualitative Concepts subtest of the MRT entered last. The five variables which entered after the first step combined to account for an additional 16% of the variance remaining in the PAL placement criterion.

The final step in the multiple regression analysis allowed all test data available through third grade to enter the equation. At this time, the program

changed names to become the TAG program. Results of this analysis are shown in Table 8.

Table 8
Multiple Regression Analysis of the Parent Checklist
for TAG Placement Utilizing Kindergarten - Third
Grade Assessments

Variable	Source	(Gr)	Beta	Correlation Coefficient	Stepwise Multiple Correlation	Stepwise R ²	R ² Increment
Composite	SRA	(2)	.690	.39**	.30	.09	
Creativity	SRBCSS	(1)	.658	.26**	.37	.13	.04
Planning	SRBCSS	(1)	-.310	.10	.48	.23	.10
Reading	SRA	(2)	-.400	.32**	.51	.26	.03
Artistic	SRBCSS	(1)	-.331	.05	.55	.30	.04
Listening	MRT	(kg)	.162	.22**	.57	.32	.02

**p<.01

When all test variables entered into the prediction of placement into the Talented and Gifted Program, Parent Checklist scores were not found to be significant predictors. This final calculation included the Otis- Lennon School Ability Test score, which served only to alter the entry of scores from the Renzulli (SRBCSS), the SRA Achievement Test, and the Metropolitan Readiness Test. Again, the Composite score from the SRA was found to be the best predictor of TAG placement, accounting for 9% of the total variance in the criterion of placement into the TAG program. Two of the Renzulli scores, Creativity and Planning, entered next with Creativity being the second best predictor of TAG placement (accounting for 4% of the remaining variance) and Planning entering at the third step. Planning accounted for 10% of the remaining variance, the largest incremental increase of any of the variables that did not enter at step one. The Reading subtest of the SRA entered at the fourth step, while the child's artistic tendencies as measured by the Renzulli

entered fifth. The final variable considered to be significant in predicting TAG placement was the listening subtest of the MRT, which was also an early predictor of placement into the PAL Program.

Taken altogether, the multiple regression analyses indicated that the Parent Checklist was a significant predictor of placement into programs for the gifted through the second grade. At this time, the test information included the PCL, MRT, Torrance, Renzulli, and the SRA. It was also an important finding that certain scales of the PCL, rather than the total score, were significant predictors. This supports the use of parental information in the identification procedures for placement into programs for the gifted.

Pearson correlation coefficients were used to investigate the remaining five hypotheses - that the Parent Checklist would be positively correlated with a variety of instruments used to identify advanced and creative students. These correlations are shown in Tables 9-13 on the following pages.

Subsidiary Research Question 1. Is there a positive correlation between the Parent Checklist and the Metropolitan Readiness Test?

Table 9

Coefficients of Correlation Between the Parent Checklist and the Metropolitan Readiness Tests

	Metropolitan Readiness Tests								
	Begin Cons	Snd-Ltr Corres	Vis Match	Find Patt	Sch Lang	List en	Qual Conc	Qual Opns	Total Test
PCL Total	.32**	.36**	.23**	.30**	.25**	.28**	.27**	.37**	.40**

**p<.01 n=1399

The PCL was significantly correlated with the MRT. The highest correlation was noted for the total test; however, the strength of these correlations can only be described as moderate at best. The next highest correlations of .37 in Qualitative Operations and .36 in Sound-Letter Correspondence occurred in subtests directly related to the development of math and reading skills.

Subsidiary Research Question 2. Is there a positive correlation between the Parent Checklist and the Scales for Rating the Behavioral Characteristics of Superior Students?

Table 10

Coefficients of Correlation Between the Parent Checklist and the Scales for Rating the Behavioral Characteristics of Superior Students

SRBCSS Scores								
	Learn ing	Moti vation	Creat ivity	Lead ship	Artistic	Com Pre	Com Exp	Plan ning
Parent Checklist Total	.34**	.36**	.30**	.24*	.30**	.32**	.25*	.27*

n=71 **p<.01 *p<.05

The Parent Checklist was positively correlated with the SRBCSS in all of the scales utilized. Moderate correlations were noted with the highest correlations being found in scales which measured teacher perception of the child's motivation, learning abilities, and in the ability to communicate with precision.

Subsidiary research Question 3. Is there a positive correlation between the Parent Checklist and the Torrance Tests of Creativity (Figural)?

Table 11

**Coefficients of Correlation Between the Parent
Checklist and the Torrance Tests
of Creativity (Figural)**

Parent Checklist Traits

	Rdn Dev	Mtr Dev	Lang Env	Obs	I&O	T&PS	A&C	M&D	Cur	Soc Sk	Ind	Total
Torrance	-.01	-.23*	.31**	.03	-.02	.03	-.20*	.09	-.09	.06	.02	.01

n=71 **p<.01 *p<.05

The Parent Checklist was not significantly correlated with the Torrance Test in terms of the total score. One scale of the checklist, Language Development, was significantly (and positively) correlated with the Torrance while two of the subtests were significantly correlated negatively. This pattern of correlation coefficients indicated that as scores on the Motor Development and Attention and Concentration scales increased, performance decreased on the Torrance. With the highest correlation occurring with a verbally loaded checklist scale, it is suggested that verbal skills do improve performance on this particular test although they are not specifically measured.

Subsidiary Research Question 4. Is there a positive correlation between the Parent Checklist and the SRA Achievement Tests?

Table 12

**Coefficients of Correlation Between the Parent
Checklist and the SRA Achievement Test Scores
for the Second Grade**

SRA Scores

	Read ing	Math	Lang Arts	Comp Ach	Ability
PCL Total	.31**	.24**	.27**	.30**	.27**

**p<.01 n=1036

The Parent Checklist was significantly correlated with the second grade SRA Achievement Test. Moderate levels of correlation were noted with the highest being found in the reading sections of the test and in the Composite Score. These higher correlations with reading and the total test compared with ability may indicate that the checklist is more closely related to academic achievement rather than intelligence.

Subsidiary Research Question 5. Is there a positive correlation between the Parent Checklist and the Otis-Lennon School Ability Test?

Table 13

Coefficients of Correlation Between the Parent Checklist and the Otis-Lennon School Ability Tests for the Third Grade

Parent Checklist Traits

	Rdn	Mtr	Lang	Obs	I&O	T&PS	A&C	M&D	Cur	Soc Sk1	Ind	Total
OLSAT	.31**	.03	.19**	.08**	.26**	.17**	.11**	.20**	.09**	.10**	.06*	.23**

**p<.01 *p<.05 n=955

The Parent Checklist was significantly correlated with the Otis-Lennon School Ability Test. Low to moderate correlations were noted with the correlation of .23 with the total test being significant at the .01 level. It should be noted at this point, however that low correlations may reach significance if the sample size is large. Reading was found to have the highest correlation with this measure of ability.

CHAPTER V

SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS

Chapter Five presents a summary of this research study with an interpretation of the results according to each of the eight hypotheses. Limitations of the work are presented, as are conclusions, implications, and recommendations for future research.

Summary

The purpose of this study was to develop and validate a parent checklist for use in a suburban school district. The development of the instrument included the determination of reliability of the instrument and its content validity. In order to assess predictive validity, multiple regression analyses were completed with the checklist and with other tests in use in the school division which were used in the process of placement into programs for the gifted. Additionally, correlation coefficients with the checklist and with those other tests were obtained. Information for this study was gathered prior to the children's entrance into kindergarten through the end of the third grade, a time span of approximately four years. Sample sizes for various portions of this study ranged in size from a matched pair analysis of 47 to a description of measures of central tendency for the checklist for 1574 students.

Statistical analysis concerning all research questions involved correlations (Cronbach's Alpha and Pearson Product Moment), and multiple regression. The hypotheses were tested at both the .01 and the .05 levels of significance.

Conclusions

The conclusions concerning the reliability of this instrument, its correlation with other tests, and its ability to predict placement into programs for the gifted will be presented in the context of each research question.

Research Question 1. Is the Parent Checklist for New Kindergarten Pupils a reliable instrument?

The question as to whether The Parent Checklist for New Kindergarten Pupils was a reliable instrument was affirmed. Intercorrelations for each of the eleven scales in the checklist with the total score were found to be significant at the .01 level. The correlations ranged from .49 to .73, and were described as being low to moderate. Test-retest reliabilities were also calculated and were found to be significant for eight of the eleven scales. The correlation of .54 for the total checklist was significant at the .01 level and was considered to reflect a moderate degree of correlation. Finally, the results of *t*-tests calculated on the test- retest sample revealed no significant differences in the total score and for each of the eleven scales.

Research Question 2. Are parents reliable sources of information for school personnel when asked to describe characteristics of their preschool children?

The second question asked about the reliability of parental information concerning their child's levels of skills in the areas of reading, motor and language development, numerical awareness, memory, and attention/concentration. Parents were also asked to rate their child's level of curiosity, independence, and social skills with the PCL. The analysis of the frequency distribution for 1582 checklists revealed that only 0.76% were rated as being in the highest category for all areas of the scale. As this figure was well within the percentage of students of students in the gifted range of a population, it was concluded that parents did not 'fake good' and inflate scores when given an instrument which would have allowed them to do so. Analysis of mean scores of students who were later found to be gifted and for mainstream students revealed that the preschool parental reports did differ significantly for the two groups for the total checklist and for nine of the eleven scales. Based on these two indicators, it was concluded that parents did provide reliable information about their children's levels of skills.

Research Question 3. Does the Parent Checklist predict placement into programs for the gifted?

The third question sought to answer whether or not the PCL was able to predict placement into programs for the gifted. The answer to this question was negative in terms of the total checklist score; however, it was found that certain scales in the checklist were significant predictors for placement in certain grades when used in combination with other evaluation instruments.

Subsidiary Research Question 1. Is there a positive correlation between the PCL and the Metropolitan Readiness Tests?

The research question that inquired as to whether there would be a positive correlation between the PCL and the Metropolitan Readiness Test was answered positively. Correlations with the eight subtests of the MRT and the Total Pre-reading Composite Score were all significant at the .01 level, with correlations ranging from .23 in the Visual Matching subtest to .40 for the Total Pre-reading Composite Score. These correlations were described as being moderate, and were calculated for 1399 students.

Subsidiary Research Question 2. Is there a positive correlation between the PCL and the Scales for Rating the Behavioral Characteristics of Superior Students?

This research question asked if there would be a positive correlation between the PCL and the Scales for Rating the Behavioral Characteristics of Superior Students. This question was answered positively based on a stratified random sample of 71 students. The total checklist correlated positively with the Learning, Motivation, Creativity, Leadership, Artistic, Communication- Precision, Communication-Expressiveness, and the Planning Scales. Correlations were considered to be low to moderate, and a range of .24 to .36 was found. The Motivation and Learning scales were the highest obtained with correlations of .36 and .34 found, respectively.

Subsidiary Research Question 3. Is there a positive correlation between the PCL and the Torrance Tests of Creativity (Figural)?

The sixth question dealt with the correlation between the PCL and the Torrance Tests of Creativity (Figural) with a stratified random sample of 71 students. Significant correlation with the total checklist score was not found, so this was answered negatively. Only one scale of the checklist (Language Development) showed significant positive correlation, and a moderate level of .31 was found.

Subsidiary Research Question 4. Is there a positive correlation between the PCL and the SRA Achievement Tests?

The research question which asked if there would be a significant correlation between the Parent Checklist for New Kindergarten Pupils and the SRA Achievement Tests was answered in the affirmative, and was calculated for 1036 students. Moderate levels of correlation were noted, ranging from .24 in mathematics to .31 in reading. Correlations of .27 and .30 were obtained for the ability portion of the test and for the composite achievement score, respectively.

Subsidiary Research Question 5. Is there a positive correlation between the PCL and the Otis-Lennon School Ability Test?

The answer to the final research question which asked if there would be a significant correlation between the Parent Checklist and the Otis-Lennon School Ability Test was yes. An analysis of the correlations computed for each of the eleven scales of the checklist revealed significant correlations for ten of

the eleven scales, though low levels (below .20) were noted for seven of the scales. A significant correlation was not found for the motor development scale, indicating that different traits of young children were being measured by the Otis-Lennon and that particular portion of the checklist. The highest correlation (.31) was found between the Otis-Lennon and the Reading scale.

Limitations

This study was conducted in a public school setting over a period of approximately four years. The measurement instruments utilized were those chosen by the school district to be the best available indicators of readiness, achievement, creativity, giftedness, and ability. At the time the study began, these instruments were carefully screened for their intended purposes, and in fact, were chosen from lists of nationally standardized instruments which were approved for use by the State Department of Education. However, because new instruments were developed and implemented during the course of this study, the ability to generalize findings about the correlations of the Parent Checklist for New Kindergarten Pupils to tests currently in use is limited by the following:

1. The Metropolitan Readiness Test used for this study was published in 1976 and replaced in 1986 with the current edition. The children involved in this study were the last class in the school division to take the 1976 edition of the test.
2. The SRA Achievement Test used in this study for grade 2 was chosen because the test corresponded to tests given in grades 4, 8, and 11 as part of the Virginia State Assessment Program. Because a different test series was adopted for the state program in 1986, the

achievement correlations do not correspond with tests currently used in the state program in Virginia.

3. The ability test used as the third grade testing in this study was the 1979 edition of the Otis- Lennon School Ability Test. This instrument was replaced in 1989 with a new edition of the instrument, therefore any conclusions drawn from these correlations were drawn from an instrument which has become outdated.

Implications

Data gathered from this study indicated that parents can be a reliable and valid source of information which should be tapped when school personnel gather information about young children for placement into programs for the gifted. Information obtained during the analysis of the second research question revealed that parents did not inflate scores in order to make their children appear more advanced than they actually were. In light of the fact that increased expectations are being made of educators to provide high quality programs for young children, it would appear that obtaining information from the first teachers of these children (the parents) would be of benefit to those who teach them later. Special notice should be given to the use of parental information in the earlier grades, especially if state mandates require that children be selected for services in kindergarten. By the use of parental information, it is reasonable to expect that the time needed to identify students would be shortened which would allow the children involved to have more instructional time in programs as a result.

Other data indicated that parental information as described above may be useful in the identification process for gifted programs. Because of the national concern over what has been described as "high stakes testing" the National Association for the Education of Young Children has called for ongoing assessments of children's development and learning in order to make sound decisions about instructional planning and individualized instruction. As a part of this "ongoing assessment", it has been recommended that information be gathered from multiple sources - indicating that schools should look beyond a single test score when making decisions about children. This study indicated that a parent checklist may very well serve as one of those sources.

The multiple regression of test data used in the identification process for gifted programs revealed that information from teacher assessments in the form of a rating scale consistently emerged as being significant predictors of placement. In this study, the teachers appraisal of a student's level of motivation, planning skills, creativity, and artistic skills were all significant predictors of placement into gifted programs. Because of the fact that teachers' perceptions of students' levels of creativity were better predictors of placement than actual performance on creativity tests, the use of multiple sources of data when evaluating children for such programs is underscored.

Recommendations

1. This study has indicated that parents are a reliable and valid source of information for school personnel; therefore, the checklist should continue to be used.
 2. Further analysis of the checklist should be completed to determine the degree to which the information is helpful in planning programs that serve other students.
 3. The Parent checklist should be revised. Based on the analysis of the instrument, certain scales need to be either eliminated or rewritten. In particular, the "Observation of Environment" scale should be revised and replaced.
 4. Based upon the fact that student motivation as measured by the Renzulli was a significant predictor of placement into programs for the gifted, it is recommended that a scale be developed for this trait.
 5. After the revision process is completed, further analysis should be completed with current readiness ability and achievement tests to determine the degree of correlation with different tests used throughout Virginia. The Iowa Tests of Basic Skills are now used as part of the Virginia State Assessment Program, and further studies with this instrument and the PCL are indicated.
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APPENDIX SECTION

- I. Parent Checklist for New Kindergarten Pupils**
- II. Letter of Consent**
- III. Memo to Principals**
- IV. Memo to Panel of Judges**

APPENDIX I.

Parent Checklist for New Kindergarten Pupils

Parent Checklist for New Kindergarten Pupils

Child's Name _____

Birthdate _____

School _____

Parent/Guardian Completing This Form _____

Date Completed _____

Directions: Below are statements that describe children. In each row, read the descriptions in all five boxes. Then put an X in the corner of the box that best describes your child. Some of the statements in a box may not describe your child, but mark the box that best describes the child's level of development now. This will help the school plan the program that best meets your child's need. **MARK AN X IN THE ONE BOX IN EACH ROW THAT BEST DESCRIBES YOUR CHILD NOW.** (Please complete both sides of this form.)

1. Reading	Does not know or recognize letters	Recognizes a few capital letters/ recognizes own first name	Recognizes many capital letters, some small letters, and a few words that are frequently seen, such as road signs, restaurant names	Recognizes all capital letters, and many small letters, and some words	Reads and understands sentences of 4 or more words
2. Motor Development	Cannot ride tricycle or "Big Wheel"; has poor balance; often spills while drinking	Cannot skip but can run well; uses fork or spoon; can throw ball but cannot catch it	Can throw ball and catch it; has good balance; can put on coat without help	Can tie own shoes; copies letters and numbers; puts puzzles together; hops on one foot; prints own first name	Can skip; can cut with scissors; can ride bicycle; can jump rope; colors within lines
3. Language Development	Seldom uses words	Uses simple words but not sentences	Adequately expresses self using short simple sentences	Converses meaningfully with peers and adults in complete sentences	Expresses ideas and thoughts clearly, using highly descriptive words; unusually fluent
4. Observation of Environment	Does not react to stimuli like color, music motion, etc.	Seldom responds to stimuli like day/night, hot/cold, and season changes	Sometimes responds to certain stimuli like music, color, movement, and beauty	Sometimes enjoys stimuli such as music, color, movement, and beauty	Often enjoys art, music, literature, beauty, or changes in environment like flowers, trees, rainbows, etc.
5. Identification & Order (Sorting)	Does not identify parts of his/her body, colors, and pieces of furniture	Can identify a few common animals, parts of his/her body, colors, and pieces of furniture	Identifies many common animals, colors, pieces of furniture, and body parts such as head, hand, foot, arm, or leg; counts up to 10	Recalls 4 or more items or events in order; can tell how such objects are alike in color, size, and shape; recognizes numerals up to 10	Recalls many items and events in order; can see relationships between objects; adds numbers up to 10
6. Thinking & Problem Solving	Needs help to play with toys or children's games	Sometimes needs help in playing with toys or games	Sometimes plays alone; can identify positions like first, last, top, bottom, big, little, etc.	Works and plays independently; can complete simple children's puzzles	Works and plays independently; is able to solve own problems; recognizes danger; understands result of own actions

(over)

7. Attention & Concentration	Watches TV less than 5 minutes without interruption; is unable to sit still and listen to story or play with a toy more than 3 minutes	Watches TV up to 15 minutes without interruption; can listen to story up to 10 minutes; can play with a toy or game 5-10 minutes	Watches children's TV shows up to half hour without interruption; listens to story up to 15 minutes; plays with a toy or game up to 10 minutes	Watches children's TV shows up to an hour without interruption; listens to story up to 25 minutes; plays with a toy or game up to 20 minutes	Looks at books alone up to a half hour without interruption; enjoys being read to for long periods; plays with toy or game 30 minutes or more
8. Memory & Directions	Unable to follow commands; cannot follow directions	Follows one-part commands or directions	Follows directions to do 2 tasks or actions; can repeat series of 3 or 4 numbers; tells own first and last name	Follows directions to do 3 tasks or actions; tells either home telephone number or address; repeats a sentence of 3 to 5 words	Understands complex directions; repeats a sentence of 6 or more words; remembers home telephone number and address; knows right from left
9. Curiosity	Accepts things as they are	Rarely asks questions	Asks questions about some things	Asks general questions (how, why) about many things	Curious about many things; asks detailed questions about everything; interprets pictures and stories in own words
10. Social Skills	Needs to have own way; does not share with others; will not take turns; cries easily; gets angry frequently	Seldom takes turns; rarely shares with others	Sometimes shares with others; sometimes takes turns	Usually accepts change; usually takes turns; appears secure without parents present	Takes turns most of the time; follows game rules; respects adult direction; sensitive to feelings of others; shows self control most of the time
11. Independence	Always needs help eating, dressing, toileting	Sometimes needs help eating, dressing, or toileting	Rarely needs help eating, dressing, or toileting	Uses spoon and fork for eating; sometimes answers telephone properly; can fix bowl of cereal	Uses spoon, knife, and fork for eating; can select clothes and dress self; answers telephone properly; can make sandwiches

Please answer the following questions: (Use another page if you need more space.)
What special interests does your child have?

Does your child have a speech problem such as stuttering? If yes, please comment.

Does your child have a hearing/vision problem? If yes, please comment.

Does your child have a problem or handicap not described above? If yes, please explain.

Is English the language usually spoken at home? If no, what language is used? Does your child speak English?

How many brothers and sisters does your child have? Number older: Number younger:

Has your child attended a preschool program? If yes, please identify it and describe the program in the space below.

APPENDIX II.

Letter of Consent



April 7, 1986

Dear Parents,

As part of a research project being conducted through the Department of Research and Planning, your child has been selected for a special creativity testing program. The program will involve group testing of creativity and teacher ratings of various skills associated with average to above average abilities. Testing at Elementary will be conducted during the week of April 14-18.

The testing period will last approximately one hour. The test itself will consist of various drawing activities. The children will be tested in groups during the regular school day at a time that is convenient with their classroom teachers. After the testing is completed, conferences may be scheduled at school to interpret the results to you.

If you would allow to have your child participate in this program as described, please indicate your permission by marking the "yes" box in the section below. If you are not interested in having your child participate, please indicate "no" in the box below. Please remember to sign and date the form. Whatever your choice, please detach the bottom portion of this form and return it to school with your child by Monday, April 14th. If you have questions about this testing program, please give me a call. I may be reached at 737-3496.

Sincerely,

W. Glen Miller, Jr.
Testing Specialist

- ☐ Yes I give permission for my child _____
(Child's name)
to participate in a group testing program for creativity.
- ☐ No I do not give permission for my child _____
(Child's name)
to participate in a group testing program for creativity.

Parent's Signature

Date

APPENDIX III.

Memo to Principals



Henrico County Public Schools

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P. O. Box 40 • Highland Springs, Virginia 23075 • (804) 737-3417

TO: Mr. Principal, Elementary School

FROM: Glen Miller, Testing Specialist

SUBJECT: Testing and Rating of First Grade Students

Date: April 8, 1986

I want to thank you again for allowing me to work with a sample of your first graders for the purpose of obtaining correlation data for the Kindergarten Parent Checklist. I have included with this memo the parent permission letters that will be needed before the children can be tested. Would you please distribute these to the parents by allowing the children to take them home? I am hoping that the letters will be returned very quickly, because we had discussed my testing the children next week.

The following children were drawn from a stratified random sample of your first graders who also had kindergarten data:

Name	Room	Name	Room
Joshua	C016	Sarah	C009
Brenton	C014	Kristina	C015
Luckie	C014	Megan	C016
McLean	C015	Anne	C016
Robert	C016	Julia	C013
Erik	C013	Elizabeth	C013
David	C014	Lynn	C016
Nathan	C014	Kathryn	C016
Mason	C013	Kellie	C009
Spencer	C013	Alexander	C013
Kristy	C105	Constance	C016
David	C014	Megan	C014

Please make sure that only these children take the permission letters home. If there are any who have moved and are not in school at this time, please give me a call so that another child may be substituted.

The teachers will also be asked to rate these children by the use of the Scales for Rating the Behavioral Characteristics of Superior Students. These scales will be distributed later in the week.

Thank you again. If you have questions, please call.

APPENDIX IV.

Memo to Panel of Judges

TO: Distinguished Members of the Blue Ribbon Panel of Qualified Experts Validating the Parent Checklist for New Kindergarten Pupils

From: Glen Miller

Subject: Validating Study of the Parent Checklist

Date: March 20, 1986

Enclosed with this memo are the materials for your use in validating the Parent Checklist for New Kindergarten Pupils. We discussed this several weeks ago over the telephone, and after an attack of the flu, Otis-Lennon, and the SRA Tests, I am finally getting the material out to you.

You have been sent eleven small envelopes. Each envelope contains all of the cells (five) for the scale as identified on the front. Please rank the cells from the youngest to the oldest developmentally by marking them with either a 1,2,3,4, or 5 with a ranking of "1" indicating the youngest developmental task to a ranking of "5" for the most advanced.

After you have completed the rankings, place the five cells back into the appropriate envelopes and return. If, in the process of the rankings, you see any statements that either appear ambiguous or incorrectly placed within each cell, please comment on a separate sheet of paper.

I appreciate your assistance and your willingness to help me with this project. Please enjoy the enclosed treats as you work.

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